Patent Claims

1. A method for automatic identification of the clock frequency of a system clock (15) for the configuration of a peripheral device (12), having the following steps:

generation of a secondary clock (16) at a predetermined clock frequency;

application of the system clock (15) and of the secondary clock (16) to a host (10);

application of the system clock (15) and of the secondary clock (16) to the peripheral device (12);

determination of the clock frequency of the system clock (15) in the peripheral device (12) by means of the secondary clock (16); and

configuration of the peripheral device (12) using the determined system clock (15).

2. The method as claimed in claim 1,
wherein
the clock frequency of the system clock (15) is determined by counting a number of edge changes of the system clock (15) within a predetermined number of periods of the secondary clock (16).

3. The method as claimed in claim 1 or 2,
wherein,
during the configuration of the peripheral device (12), the identical interface transmission rate is set for a first interface (11) of the host (10) and for a second interface (13) of the peripheral device (12) as a function of the clock frequency of the determined system clock (15).

4. The method as claimed in claim 3,
wherein
the interface transmission rate is set to an interface transmission rate which is defined by the standard of the interfaces (11, 13).

5. The method as claimed in one of the preceding claims,
wherein,
after an initialization phase, the system clock (15) can be changed by the main device (10) with a system clock (which is then new) of the peripheral device (12) being signaled exactly via interfaces (11, 13).

6. The method as claimed in one of the preceding claims,
wherein
tolerances of both the system clock (15) and of the secondary clock (16) are taken into account in the determination of the clock frequency of the system clock (15) by the peripheral device (12).

7. The method as claimed in one of the preceding claims,
wherein
the transmission rate of the data transmission (14) between a first interface (11) and a second interface (13) is dependent on the clock frequency of the system clock (15).

8. The method as claimed in one of the preceding claims,
wherein
the clock frequency of the system clock (15) is variable at predetermined clock frequencies and is determined by the host (10) after an initialization phase.

9. The method as claimed in claim 8,
wherein
the clock frequency of the system clock (15), which is determined automatically by the peripheral device (12), has discrete clock frequencies which are compared in the peripheral device (12) with discrete clock frequencies that are stored in a table, in order to use the tabular value of the clock frequency as the current clock frequency of the system clock (15).

10. The method as claimed in one of the preceding claims,
wherein
a PLL circuit (17) in the peripheral device (12) generates a constant clock frequency (18) from the clock frequency of the system clock (15), which clock frequency (18) is supplied to a second interface (13) and/or to a processing device (19), such as a processor, controller or memory.

11. The method as claimed in one of the preceding claims,
wherein
the peripheral device (12) is a Bluetooth module, and is configured for the system clock of a mobile radio device, for example a cellular telephone.